



Effect of Noise Pollution on the whole Ecosystem

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Abstract

Most of us are accustomed to the sounds we hear every day, whether it's loud music, the television, people talking on their phone, the traffic, and even pets barking in the middle of the night: these have all but become a part of the urban culture, and they rarely disturb us. However, when the sound of the television keeps you from sleeping all night or the traffic starts giving you a headache, it transcends the boundaries of mere noise and qualifies as noise pollution. For many of us, the concept of pollution is limited to nature and resources. However, the noise that tends to disrupt the natural rhythm of life makes for one of the biggest pollutants.

Noise pollution is a major global problem, primarily affecting the health of humans, animals, and ecosystems. This paper provides a brief overview of the effects of noise as site contamination on lethal situations and inter-organism problems in terms of noise exposure. Studies have shown that this kind of desecration has a severe impact not only on humans through situations and problems, but also on biodiversity. There is still time in the hands of world institutions, original corporations, and governments to use advanced resources to level the terrain. With wisdom and technology being created at their own pace, community points around the world have evolved not only in size but also in living conditions. This creates a new perception of noise pollution as part of our daily lives. This is done through studies that track the extent of damage caused by noise from various natural and anthropogenic sources, especially businesses. Noise has to do with the physical, inner, emotional, and brain of every individual, whether human or beast. This is an implicit obstacle to living conditions and should be subject to judicial review.

INTRODUCTION

Noise pollution is an environmental threat to domestic, commercial, man-made, and agricultural facilities in countries around the world, especially in developing countries. Noise pollution harms human health and terrain. Jariwala (2017) pointed out that noise pollution is a major problem in cosmopolis around the world and defined noise as unwanted sound. According to Jariwala et al. (2017) from all unwanted noise in our communities and a form of air pollution that is a problem for health and well-being. Jariwala et al. (2017) comment that noise negatively impacts future generations by deteriorating home, social, and learning environments with a corresponding loss of benefits.

Khobragade (2015) identified noise pollution as the third most dangerous pollution after air and water pollution. Druliker et al. (2015) found that health commodities for noise annoyance are "hail disturbances, speech disturbances, sleep disturbances, cardiovascular and internal health disorders, impaired work performance, negative social behaviors, and anger." It is a reaction of According to Basner, M., Babisch, W., Davis, A., Brink, M., Clark, C., Janssen, S., and Stansfeld, S. (2014), "Noise is ubiquitous in everyday life. Hunashala and Patil (2012) stated that noise pollution is a serious environmental problem in Kolhapur.

LITERATURE REVIEW

Dorlikar, Awadhoot, Haque, Ratkanthiwar, Sarkar, Kolhe, Asrar, and Khobragade (2015) assessed public perceptions of noise pollution in Nagpur city by direct questioning based on a sample of 100 witnesses, finding that most I found that residents recognize the seriousness. of noise pollution did not fully recognize noise as a pollutant. Their research also found that business noise and construction work were the main sources of noise pollution in Nagpur City and that residents were slow to speak up about noise from religious practices.

Basner, Babisch, Davis, Brink, Clark, Janssen, and Stansfeld (2014) investigated the health status of audible and non-audible noise products and their effects in professional settings, particularly music players, sleep disturbances, daytime fatigue, and hypertension. A hail storm discovered in Cognitive performance is impaired in school children as noise-related problems affect patient problems and staff performance.

Oviasogieand Ikudayisi(2019) investigated the effect of noise exposure on residents' well-being in Benin City, Nigeria adopting a cross-sectional survey of urban residents and ordinal regression analysis to determine factors that influenced neighborhood well-being and found hindrances to communication, interference with sleep, stress, annoyance, as the major effects of urban neighborhood noise pollution. Their study concluded that most residents perceived neighborhood noise as harmful to health and might stimulate aggression and other anti-social behavior.

Van den Bosch, Tjeerd, Andringa, Peterson, Ruijsenaars, & Vlaskampm (2017) conducted a study on the relationship between natural and non-natural sound scapes such as beach, Forest, Urban, Music, and silence on the mood of people with severe or profound intellectual and multiple disabilities and confirmed the result of earlier studies that there is a relationship between the auditory

environment and the mood of people with severe or profound intellectual disability. Thirteen participants with severe or profound intellectual disability and challenging behavior were presented with 5 different soundscapes (Beach, Forest, Urban, Music, and Silence) in a dedicated room. Direct support professionals made mode observations before and after each trial. Results show that there is an increase in the frequency of observations of a relaxed mood across conditions, a greater increase in the frequency of observations of a relaxed mood, and a greater decrease in the frequency of observations of an interesting mood were associated with the natural conditions (Forest and Beach) rather than the non-natural conditions. Muñzel, Goril, Babischand Basner (2014) reviewed the literature on the cardiovascular effects of environmental noise and found that environmental noise affects hearing, causes annoyance, interferes with sleep, impairs cognitive performance, and has been found to increase arterial hypertension, myocardial infarction, stroke, and blood pressure. Stress hormone levels, oxidative stress.

Jaliwala, Said, Pandya, Gajera (2017). A review of the literature on noise pollution and human health shows that noise pollution affects health, impairs living, learning, social and working environments, and causes economic and intangible losses such as well-being. I understand. Their review also found that noise exposure leads to hearing loss, sleep disturbances, cardiovascular disease, social impairment, decreased productivity, negative social behaviors, angry reactions, absenteeism, and accidents. It destroys the quiet enjoyment of property and leisure by owners and residents and increases the incidence of anti-social behavior.

Bhosale, Late, Nalawade, Chavan, and Mule (2010) evaluated traffic noise levels in the Indian city of Aurangabad at six locations: A survey of Nagar Naka, KrantiChowk, CIDCO bus station, around the railway station, Dhoot hospital and Baba gas pump show that the minimum noise level on weekdays is 74dB and the maximum noise level is 86dB, the minimum noise level on weekends is 70dB and the maximum noise level is 81dB. It turns out that their study also showed that the measured noise levels exceeded the prescribed noise levels.

Spaces of Noise Pollution

I. Dormitories, Educational Institutions, Offices

II. Social, Religious, Public and Recreational Fields

III. Transportation

IV. Commercial and industrial areas

v. Others include battlefields, combat training grounds, playgrounds, noisy neighborhoods, unruly pets, slums, call centers, switchboards, etc.

Source of Noises

1. Toys and PlayStations.
2. Mechanical home, kitchen, office, and teaching equipment.
3. Entertainment: Personal audio systems such as radios, televisions, music systems, bands, speakers, cinemas, earphones, headphones, and Bluetooth devices.
4. Communication equipment such as mobile phones
5. Vehicle: Motorized wheels for personal use on commuters, public transport such as buses, trains, and planes, and freight vehicles such as trucks, freight trains, and freight planes.
6. Mechanical equipment: Hammers, grinders, lawnmowers, mixers, fans, air coolers, air conditioners, etc.
7. Large machines: Industrial trucks, drills, machines, and vehicles for construction and maintenance of houses, apartments, office buildings, schools, universities, factories, etc.
8. Deforestation or urbanization: This is an indirect contribution to noise. Deforestation leads to increased construction of housing, commercial areas, industry, roads, traffic, etc., ultimately leading to increased noise in previously quiet areas.

All animals are affected by loud noises and noise pollution and respond by increasing or decreasing their noise. They become irritable, lose focus, and, depending on the situation, temporarily or permanently turn away from the noise. Noise pollution affects people's physical and mental health. Noise exposure can lead to increased stress, sleep disturbances, difficulty with normal speech, difficulty concentrating, irritability, violent behavior, increased heart rate commonly seen with loud drum beats, and tachyarrhythmia, cause vasoconstriction, hypertension, and related disorders, causing psychomotor effects.

Prolonged noise exposure can lead to tinnitus and noise-induced hearing loss (NIHL). This is more likely to be seen in traffic, occupational, and recreational noises where exposed individuals were found to have a significant NIHL than unexposed individuals, such as at construction sites and factories, prolonged exposure to noise by pregnant women and children accompanied by adults. Depending on the volume and duration of exposure, it can cause temporary or permanent hearing loss. The sooner children are exposed to noise, the sooner they develop noise-induced hearing loss (NIHL) and other non-hearing problems. We usually test newborns for hearing at birth, but if normal, we forget about hearing and related problems that may arise as children grow up. Observant parents and teachers It is only recognized when a child or adolescent observes developmental delays or poor grades or notices hearing loss in a child or young adult. By this point, hearing loss is usually permanent, adding to the cumulative effects of exposure to low-level noise and the aging process.

Health effect of Noise Pollution

aural Health Effects of Noise Pollution

1. Tinnitus is an abnormal ringing sound that occurs primarily within the body. It can be a whistling, grinding, hissing, buzzing, or similar noise. When frequent, tinnitus can be irritating and interfere with daily activities such as sleeping, working, or studying. Noise exposure and aging are important causes of tinnitus and are of sensory origin.

2. Noise-Induced Hearing Loss (NIHL) – NIHL affects approximately 5% of the world's population. About 50% of hearing loss is caused by exposure to noise. The WHO estimates that 50% of children and adults wearing personal hearing aids between the ages of 12 and 35 are at risk of hearing loss from excessive volume or prolonged use. NIHL most commonly causes her SNHL, affecting the inner ear, nerves, and nerve tissue. Sudden exposure to very loud noise can cause inflammation of the eardrum and perforation of the eardrum, causing severe pain and hearing loss.

Non-auditory Health Effects of Noise Pollution

1. Sleep disturbance
2. Psychiatric disorders such as stress, mood swings, emotional imbalance, mental fatigue, inability to concentrate, intolerance, communication problems, irritability, aggression, and hostility.
3. Physical effects such as tiredness, headaches, unexplained pain, loss of appetite, and increased appetite
4. Cognitive and learning disabilities
5. Cardiovascular effects
6. Unfavorable pregnancy outcomes

Hazard of Headphones and Earbuds

Individuals who consistently use personal audio devices (PADs) with headphones or ear buds at high intensity are at risk of developing temporary or permanent threshold shifts, especially if such listening habits persist for years. His continuous use of PAD for more than 5 years can lead to changes in high-frequency (4 kHz) hearing. This hearing loss can be detected with pure tone audiometry. The audiogram shows severe hearing loss at frequencies between 3 and 6 kHz. With continued exposure, the hearing loss extends to high and low frequencies and is generally bilaterally symmetrical. The maximum safe exposure level is 85 dB for up to 8 hours, the louder the volume and the shorter the safe listening time. Therefore, safe exposure to a noise level of 100 dB is only 15 minutes per day. The PAD output range is 75dB to 136 dB. Maximum power levels are subject to worldwide regulations. PAD users typically set the volume between 75 and 105 dB. The effects of loud sounds and noise on the auditory system are cumulative and irreversible, and effective treatments are limited. However, NIHL is completely preventable. Therefore, prevention is paramount and efforts should be made to preserve hearing and

Prevent tinnitus when hazardous noise is present. Given the lack of Indian data on early childhood exposure to environmental risk factors and health effects in birth cohorts, studies need to be part of longitudinal data collection and interpretation.

Avoidance of Harmful Effects of Noise

I. Personal

1. Avoid prolonged exposure to loud noise. Use earplugs and muffs.
2. Avoid loud music, radio, and television. Keep the volume as low as possible.
3. Avoid toys, electrical appliances, entertainment audio systems, noisy machinery, and prolonged use.
4. Avoid noisy cottage industries such as mills, gemstone crushing and polishing, and manufacturing. 5. Avoid living in noisy places such as near highways, traffic jams, train stations, railways, bus stops, airports, industrial areas, etc.
6. Do not use headphones, earphones, Bluetooth, or other PADs in or near your ears.
7. Whenever possible, use the speakerphone for calls.
8. Adjust the volume to a comfortable level in quiet environments and keep the volume down in noisy environments. Volume should not exceed 60% of the maximum value.
9. You can use the smart phone app to monitor the PAD's output levels and make sure they are below 85 dB. 10. Listening breaks can help reduce exposure.
11. Ideally, he limits headphone/earbud use to less than 1 hour per day

II. Community

1. Factories, industries, bus stations, railway stations, and airports should be away from residential areas
2. Industrial machines must travel within tolerance and must use earmuffs/plugs.
3. Except for emergencies, loudspeaker use should be prohibited in religious, public, and residential areas.
4. Music concerts and the like must be held indoors and participants should be aware that such activities pose temporary or permanent NIHL risks.
5. Car horns and sirens are strictly prohibited except in an emergency.
6. In residential areas, traffic noise should be limited to less than 70 dB(A).
7. Traffic noise should be minimized by building smooth roads, limiting speed and heavy vehicles, and smoothing traffic with timed signals to reduce stops at intersections.



8. Sound barriers should be installed to reduce traffic noise.
9. All light, medium, and large vehicles, trains, and planes should be equipped with quieter engines. Their freedom of movement is restricted at night near residential areas and during the day near educational areas.
10. Noise pollution in hospitals should be addressed as a priority.

Conclusion

The survey explored public awareness of the impact of noise pollution on human health. This study found that noise pollution has adverse effects on human health. Adverse health effects include headaches, insomnia, mental disturbances, difficulty concentrating at work, hearing loss, learning disabilities, stroke, high blood pressure, and poor quality of life. The survey showed that the majority of respondents are aware of the health effects of noise pollution. The study recommends that people be well informed about the health hazards of noise pollution and that noise protection laws are rigorously implemented and enforced.

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